

### **DETAILED ACTION**

1        This communication is in response to applicant's amendment to first non-final office action, which was filed February 02, 2008.

2        Amendments and arguments to pending rejected claims 1-9, have been entered and made of record in the application of Ovchinnikov "Method for forming and transmitting signals" filed on March 5, 2003.

Claim 1 is amended.

Claims 2-9 are same as originally filed.

**Claims 1-9 are pending.**

### **Response to Arguments**

3        Applicant's amendments and arguments with respect to pending rejected claims 1-9 have been fully considered, but are not persuasive in view of the rejection cited below in their respective rejection section. The prior arts presented in the earlier office action have been used herein with further explanation, in account of the argument presented by the applicant, to further address applicant concern and to clearly show how the limitation of the claims are met by the same.

4       On Page 5 Par. 1-3 and all subsequent applicant arguments with respect to combining the cited references of EP 0122433 (Morita) and U.S. 4,543,565 (Oberstein et al.). Since both references are directed to monitoring fire and/or smoke alarm conditions and Morita incorporates the disclosure of Oberstein et al. by reference, which are analogues arts, so one skilled in the art would be aware of both disclosures. Furthermore, both analog and digital transmissions are conventional and widely used in various environments and arts.

5       On Page 5-6 Par. 4 and all subsequent applicant arguments with respect to the Morita disclosing a unipolar communication line, not a bipolar (variable polarity) communication line. The bipolar (variable polarity) communication line is characterized by periodically recurring variation of voltage polarity in the communication line.

6       As it was cited by examiner in the previous office action dated October 16, 2007 and agreed by the applicant's statement (Page 5-6, Paragraph 4). Morita discloses all claimed limitation, except the communication mode being analog.

7       As it was cited by examiner in the previous office action Oberstein et al. discloses the analog communication mode that employs a bipolar (variable polarity) communication line is characterized by periodically recurring variation of voltage polarity in the communication line (Col. 1, line 66 - Col. 2, line 2Col. 2, line 46; Col. 3, lines 63-66; Items M and Z).

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8 On Page 6-10 and all subsequent applicant arguments with respect to the cited prior arts don't disclose the claim limitation and could not be combined as it was stated above in the 4<sup>th</sup> paragraph, since both prior arts are in the same field of endeavor and used to monitor alarm conditions, one skilled in the art would be aware of the disclosures and readily understand the digital transmission mode of Morita may be substituted by the analog transmission mode with a bipolar (variable polarity) communication line is characterized by periodically recurring variation of voltage polarity in the communication line of Oberstein et al.

### **Claim Rejections - 35 USC § 103**

9 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10 The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11 Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent of Morita (0122432 B1) in view of the U.S. Patent of Oberstein et al. (4,543,565).

12 As claims 1 and 7, Morita discloses in a method of forming and transmitting signals from a fire alarm unit (Figure 1) to a receiving-monitoring instrument (Figure 2) via a bipolar communication line (Items I<sub>1</sub> and I<sub>2</sub>) with the aid of a transmitting device (Item 6) which is a part of the fire alarm unit (Col. 2, lines 39-44), the method comprising self-testing of the operability of the alarm unit components and determining the value of a monitored fire factor (Col. 1, lines 23-33), the improvement characterized in that the alarm unit is additionally provided with a gate and a logic device (Item 4), for comparing the value of the monitored fire factor with permissible value, and the signals indicating the operability of the fire alarm unit as judged from the self-testing and indicating that the permissible value of the monitored fire factor has been exceeded are transmitted (Col. 1, line 53 – Col. 2, line 44).

However, Morita does not expressly disclose the transmission line being a bipolar transmission and an analog mode.

Oberstein et al. discloses a method of forming and transmitting signals from a fire alarm unit (Item M) to a receiving-monitoring instrument (Item Z) that is a bipolar transmission line transmitting in an analog mode (Col. 1, line 66 - Col. 2, line 2Col. 2, line 46; Col. 3, lines 63-66).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to transmit in an analog mode via a bipolar transmission line, because Morita discloses a fire alarm system that senses an analog signal and converted to digital before transmission and Oberstein et al. discloses a fire alarm system that senses an analog signal and transmit an analog mode. One skilled in the art would be aware of both disclosures, since Morita incorporates the disclosure of Oberstein et al. by reference and are readily understand the sensed signal may be transmitted by any known method including the analog transmission mode, as it would have been a designer's choice and conventional to use analog transmitting mode in the art. Furthermore, both analog and digital transmissions are conventional and widely used in various environments and arts.

13 As claim 2, Morita discloses the signal indicating that the permissible value of the monitored fire factor has been exceeded is transmitted by varying and fixing the output resistance of the transmitting device (Col. 2, lines 39-54; Col. 6, lines 1-19).

14 As claim 3, Morita discloses the signal indicating correct operation or failure of the alarm unit as judged from the results of its self-testing is transmitted by short-time periodic variation of the output resistance of the transmitting device (Col. 3, lines 32-52).

15 As claim 4, Morita discloses the alarm unit is additionally provided with a normally closed switch (Item SW<sub>1</sub>), connected in parallel to the alarm unit with a device

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limiting the voltage drop at the alarm unit, the signal indicating correct operation of the alarm unit being transmitted by opening the switch (Col. 4, lines 37-61).

However, Morita does not expressly disclose the voltage drop at the alarm unit to a value of 1.5-6 V.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to set the voltage drop at the alarm unit be at a desired value including the value of 1.5-6 V through experimentation.

16 As claims 5 and 6, Morita discloses the alarm unit is additionally provided with a normally open/closed line switch inserted into a communication line gap after the alarm unit, the communication line is provided with an end resistor, and the signal indicating failure of the alarm unit is transmitted by closing the line switch (Figure 2; Col. 4, line 37 - Col. 5, line 30).

17 As claim 8, Morita discloses the alarm unit is additionally provided with a normally closed switch, connected in parallel to the alarm unit and with a gate connected in series with it, which is open under reverse polarity conditions in the communication line, and the alarm unit operability signal is transmitted by opening the switch (Col. 1, line 53 - Col. 3, line 65).

18 As claim 9, Morita discloses the alarm unit is additionally provided with a normally open line switch inserted into a communication line gap after the alarm unit,

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the communication line is provided with an end resistor, a gate, open under forward polarity conditions in the communication line, is connected in parallel to the line switch, and the alarm unit operability signal is transmitted by closing the line switch (Col. 1, line53 - Col. 3, line 65).

### CONCLUSION

19     **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

### CORRESPONDENCE

20     Any inquiry concerning this communication or earlier communications from the examiner should be directed to SISAY YACOB whose telephone number is (571)272-

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8562. The examiner can normally be reached on Monday through Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery A. Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sisay Yacob  
4/4/2008

/Jeff Hofsass/  
Supervisory Patent Examiner, Art Unit 2612